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Total Extirpation.

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CANCER OF THE UTERUS: ITS TREATMENT BY HIGH AMPUTATION COM- PARED WITH TOTAL EXTIRPATION.*

THERE is perhaps no operation in gynæcological surgery which has made more rapid strides in the past ten years than that for cancer.

It is greatly to be regretted that our alma mater did not seize the golden opportunity to be the pioneer in this great advance, and that her doors were closed against those afflicted with this most distressing malady. When it is remembered that within so few years the accident of opening the peritoneal cavity by the vagina was considered so grave, and the recorded recoveries from such accident, which were almost universal, were thought to be so wonderful as to merit special notice from the reporter, it is in strongest contrast with the opinion and practice of to-day, where almost the first step in some of these operations consists in cutting through the vaginal vault in removing the diseased organs.

It is both interesting and profitable to trace, step by step, the progress by which the operation for total extirpation of the uterus was fairly placed on a successful and safe basis; nor would perfect success have been attained in the

* Read before the Alumni Association of the Woman's Hospital in the State of New York, at its first meeting.

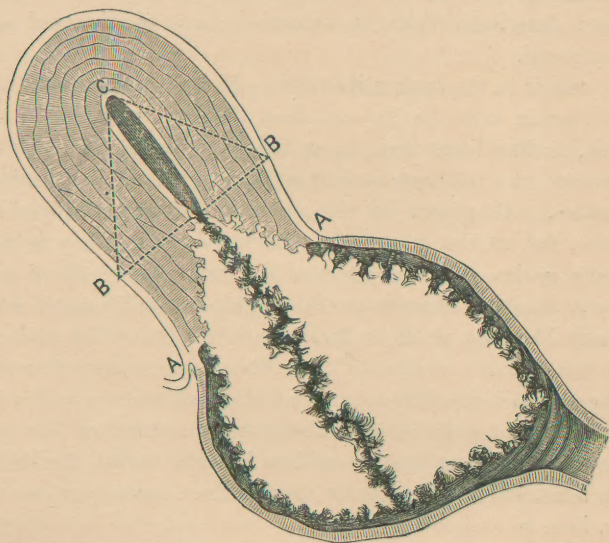
establishment 'of any surgical procedure for this disease in anything less than the total removal of the uterus. This having been accomplished, it is wise to reconsider the progressive steps of the operation and see if there are not cases where the application of some parts or combination or parts of it is not to be preferred to the more brilliant one of entire removal of the uterus.

In the "American Journal of Obstetrics" for April, 1882, I have described a method of high amputation which still appears to me superior to any that I have seen described, and its results have given a smaller death-rate and a larger percentage of cures, in a limited number of cases, it is true, than any which I have seen reported. At the risk of tiring you by calling your attention again to the steps of the operation, as well as to show how the combination of parts of different methods are applied in this, I will quote from that article its description :

"The patient being etherized and placed in Sims's position, the cervix is seized with the volsellum forceps and dragged down as nearly to the outlet as possible. This not only facilitates manipulation, but diminishes—in fact, almost entirely checks—the hæmorrhage, which otherwise may be alarming. The portio vaginalis is then cut into anteriorly with the scissors, and the supra-vaginal cervix anteriorly is separated from the bladder with the scissors, aided by the forefinger in tearing the tissues. This part of the operation is similar to Schröder's for the removal of the uterus by the vagina.

"The same incision is then made into the vagina posteriorly, and the supra-vaginal cervix separated from the peritonæum up to the level of the internal os uteri. Thus it will be seen that the peritonæum is not purposely opened in an uncomplicated case, as is done by Schröder's method. But the peritonæum is closely attached to the uterus at the

level of the internal os, and it may accidentally be cut into. The anterior and posterior incisions being now connected by lateral ones, and the supra-vaginal cervix separated on the sides in the same manner as was done in front and behind, the uterotome is to be substituted for the scissors, and a funnel-shaped portion of the body of the uterus cut out, as in the diagram.



“This step of the operation is like Sims’s, with the exception that here it is possible to remove more of the body of the uterus, because here the angle B C starts from the level of the internal os uteri at the junction of the peritonæum to the body of the uterus, both before and behind, and the apex of the cone removed extends nearly or quite to the fundus of the uterus; whereas, following Sims’s method, the base of the cone is at A A, and a portion of

the supra-vaginal cervix and more of the body of the uterus must be left.

“It is thus possible to remove the entire cervix, both infra- and supra-vaginal, and at the same time nearly or quite one half of the body of the uterus, and that the most important half; for cancer of the body of the uterus, whether of primary origin or of extension from the cervix, affects the glandular structure first, and, by the method I have described, this, its natural habitat, is removed or destroyed.

“It is in the connective tissue which so predominates in the cervix that the disease there develops so readily, and this, it has been seen, is entirely removed. The actual cautery, at a red heat, is then applied to the whole denuded surface. This part of the operation takes considerable time, for, as the traction is relaxed, there is likely to be more or less hæmorrhage, and it often requires much patience to apply the cautery thoroughly enough to each and every bleeding point to feel secure in putting the patient to bed without tampon or other dressing to control hæmorrhage. It is possible to accomplish this, however, and it is a very great gain in the subsequent treatment of the patient. The operation can seldom be done in less than half an hour, and will frequently require from three quarters of an hour to an hour.

“So long as the disease has not touched the rectum, we may still hope to remove it entirely, as I have done in several instances, even though it has implicated the whole thickness of the vaginal membrane and submucous tissue quite to the peritonæum posteriorly over a large surface. The operation must differ from that just described in that the incision into the vagina posteriorly must be made a full quarter of an inch beyond the line of any infiltration, and extend quite through into the peritoneal cavity, removing

the whole of the upper vagina with the supra-vaginal cervix. Before applying the cautery, the edge of the healthy vagina should be stitched with silver sutures to the lower part of the posterior wall of the uterus. So, too, if the anterior vaginal membrane be implicated in the disease, it may be dissected off the bladder. If the base of the bladder itself, even, be affected, so long as the ureters are not involved, we may cut away a large part of it, if we can thereby remove the entire disease, closing the fistula thus formed with silver wire before using the cautery."

The advantages alleged for this method of operating are:

1. That by it we are able to remove more of the uterus than by any other form of high amputation.

2. The opening of the peritoneal cavity is not necessarily involved in its performance.

3. The practicability of using the touch in determining the extent of the disease as the operation proceeds is retained, which can not be practiced when the galvano-caustic wire is used.

4. All the advantages of the galvano-cautery are retained by the application of the thermo-cautery, at a red heat, to all the denuded surfaces, and made more effectual even by previously being sure that the disease, as evidenced by the touch, had been removed.

5. It is more practicable for the general surgeon than total extirpation.

6. The length of respite from the disease is greater than in any reported cases of total extirpation, and the percentage of recoveries from the operation greater than by any other method of high amputation.

I have thought that it would be profitable to follow up and report upon the cases which were given in the article already referred to.

There were, then, early in 1882, ten cases where the operation had been performed, and the hope entertained that all the disease had been removed. This does not include two cases where my operation was done up to the point of applying the cautery, and which were closed with silver sutures without any cauterization, which I consider a very essential point, and therefore I have omitted them. In the remaining ten there was a uniformity of treatment, in that each step of the operation was carried out. In one of them the disease returned in a few months, and any further surgical interference was denied. In another the patient died three months after with cancer of the pancreas, the lumbar iliac glands, and the uterus.

There were, then, eight cases which were reported living and well in April, 1882, after a varying interval from the disease of from four years to a few months.

The first case was that of Dr. Morris, in which he thought he saw some sign of a return of the disease after four years. This was his conclusion from rational signs rather than from physical examination. In a letter from him, dated January 11, 1886, or eight years after the operation, he says: "Mrs. D. still lives, and, five weeks ago, when I last saw her, was attending to her household duties." He thought she had a return of her old trouble, which had occasioned profuse hæmorrhage; but this, I think, may be open to doubt, as she would not allow him to make any examination.

The second patient is now living and in the full enjoyment of health after a respite of six years and two months, her operation having been done November 8, 1879. I have seen her within three months, and there is no sign of any return of the disease. The cicatrix following the operation has contracted so much that I can not pass the smallest probe into the remaining uterine cavity. She suffers dysmenor-

rhœa to such an extent that she is obliged to use a dose of morphine about once in three menstrual periods. I have felt some reluctance in cutting through the cicatrix to make a more pervious canal, as I disliked to start any new source of irritation in the old wound, and shall not do so unless there is a retention of the menstrual flux.

The third patient was operated on January 31, 1880, and is now perfectly well, after a respite of six years. An examination made within two months shows the vault of the vagina to be a blind pouch. She having passed her menopause at the time of the operation, there is nothing to show where the operation was performed but a slight line of cicatrix not over three quarters of an inch long.

The fourth patient was operated on May 5, 1880. After a respite of two years, the disease returned in the cicatrix, and she died May 24, 1882.

The fifth patient was operated on October 7, 1880, and considers herself in good health after a period of five years and three months. I examined her carefully January 12, 1886, and found no evidence of any return of the disease. She is still menstruating regularly and without pain. She is able to do all the work for a large family.

The sixth patient was operated on October 12, 1880, and I learned from her physician, after the publication of my article in the "American Journal of Obstetrics," that she died, of a return of the disease, November 4, 1881, after a respite of but a few months.

The seventh patient was operated on May 24, 1881, and is now well after a period of four years and eight months. A careful examination made within three months shows not the slightest evidence of any return of the disease.

The eighth patient was operated on January 26, 1882, and, within four months, the cicatrix had closed in so completely that there was a retention of the menstrual flux, with

great pain, and I was obliged to cut through the cicatrix into the cavity of the uterus. The wound was kept open, until it had healed, by a glass plug, and, when she returned home, instructions were sent to her physician to pass the sound occasionally for a while to insure the patency of the canal. She has now enjoyed a respite of four years. A letter from her physician, dated January 18, 1886, reports no return of the disease, he having examined her with the speculum that very day.

Thus, in ten cases where my operation was done, six of the patients are now living, having enjoyed a respite varying from four to eight years.

When it is remembered that these ten cases, together with the two additional ones referred to where my operation, in its completeness, was not done, and which led me to complete it by the open method and the cautery, are all the cases where any radical operation was practicable in the forty-seven, which was the whole number of cases of cancer presenting themselves up to April, 1882, and that in these ten cases, which were in no sense picked ones, six of the patients are now living and apparently well, and that five of the six show absolutely no return of the disease after a careful examination with the speculum, it is certainly a most encouraging exhibit, which, with the length of respite thus far gained, reasons strongly in favor of considering the disease one of local origin.

It is true that the number is small, and so it will be found to be a fact that only a very small proportion of cases of cancer of the uterus are subjects for any radical operation; in those already reported, less than one quarter.

On the other hand, it must be remembered that these were the first and only radical operations up to 1882 which I had attempted, and, with a greater experience and familiarity with the operation, we should hope even for better results.

In the cases reported the diagnosis was made sure, not only from the gross appearances, but by microscopical examination.

It has been my custom to submit the portion removed to the microscopist to determine whether the cut surface showed healthy or diseased tissue, and from this I judge additionally whether all the disease has been removed.

No death occurred from the immediate effects of the operation, and I have universally found this class of cases very tolerant of operative interference.

I am confident that quite as much of the ultimate success in high amputation is due to the subsequent following up of the case, many times requiring repeated use of the curette and cautery. In the cases cited, with but one exception, such treatment became necessary.

I have confined myself to the consideration of all the cases treated up to 1882, because it seemed to me most valuable to follow out the subsequent histories and results of previously reported cases, especially so in the class of disease under consideration, where time alone proves the cure. I shall hope, at some future time, to take up a second series of cases occurring after 1882.

Let us now see what results have been attained in other parts of the world by other methods of high amputation. In Hofmeier's statistics from Schröder's clinic, twelve per cent. died from the effects of the operation. Of eighty-five who survived the vaginal and supra-vaginal amputations, twelve were known to be free from the disease at the end of the third year, or fourteen and ten one hundredths per cent.

Dr. Duncan, at a recent meeting of the Obstetrical Society of London, without giving any number of cases, alleged an equal percentage of freedom from the disease after two years, whether operated on by supra-vaginal am-

putation or by total extirpation, although he admitted that the operation by total extirpation was four times as fatal as that by high amputation.

Dr. Pawlik has published the results of the treatment of cancer of the cervix in the first gynæcological clinic in Vienna, which are very valuable, as the recoveries cover a longer time than any other reported results. He had collected the results of one hundred and thirty-six cases. Ten deaths occurred in the hospital, eight of which were immediately induced by the operation; all the patients were operated upon by supra-vaginal amputation. Twenty-two could not be found; of two, however, it was known that they were in good health two years after the operation. Sixteen left the hospital not cured. Thirty-one died outside the hospital; sixteen of these had in all probability a recurrence of the disease—one after three years. One had a return near the uterus two years after the operation, the cicatrix remaining unaffected. Three died of tuberculosis. For the rest the cause of death was unknown. Twenty-two had recurrence of the affection, but it was not possible to discover when they died. Among them was one who remained in good health for six years, and one for nineteen months. Two had carcinoma outside the uterus, the cicatrix remaining unaffected. Two died in childbed without recurrence—one seven years and a half and the other one year after the operation. Thirty-three were in good health: 1 more than nineteen years and a half after the operation; 2 twelve years after; 3 eight years; 3 seven years; 3 five years; 2 four years; 5 three years; 7 two years; 7 one year.

Accepting a respite of four years and over as a standard, the best published result that I have been able to find of high amputation are those reported by Dr. Pawlik, which show seven and three tenths per cent. of deaths at time of operation, and ten and three tenths per cent. well

after four years. Compared with my own, which show no death at the time of operation, and sixty per cent. well after four years, the result is most gratifying.

Let us now see what results have been attained by total extirpation. The most favorable ones have followed the vaginal methods, and the mortality of the operation since its adoption has been reduced from seventy-two to twenty-seven per cent. In the *résumé* of three hundred and forty-one cases collected by Dr. Post, and reported in the "American Journal of the Medical Sciences" for January, 1886, there was a total mortality of twenty-seven per cent., and, of the ninety-seven patients who survived the operations done previous to 1883, eighteen, or twenty per cent., were known to be well after eighteen months or two years.

The best reported results, however, are given in the cases collected by Dr. Duncan in the paper before referred to, who states that thirty-two per cent. were free from a recurrence of the disease after two years. On account of authors considering patients cured after a respite of two years, or even after eighteen months, according to Dr. Post's article, we find only exceptionally a case referred to after that length of time, and consequently know nothing of their subsequent histories. Many operators consider that the patients are well unless they hear to the contrary—which is certainly a very happy way of thinking, whereas their patients are quite as likely to have died of a recurrence of their disease, having become discouraged at finding that their operation had proved unsuccessful in curing them, and this many times even after they had enjoyed a freedom of two years.

I think that considering the period of a two years' respite a cure may be very justly questioned, for we see too many cases where the disease returns after that time to so consider it, as instanced by the cases collected by Dr. Paw-

lik, where the disease was known to recur in two years in one case, in three years in another, and in six years in still another. In my own cases there was a recurrence of the disease in one after two years. I am strongly of the opinion, therefore, that quite as much practical advantage will accrue from following a few cases through several subsequent years as from the consideration of a large number of cases for only a period of a few months.

The operation, then, of total extirpation is, even under the most favorable conditions, according to most authorities, four times as dangerous as that of high amputation, which proportion I should consider very low, judging from my own experience. If the length of respite was much larger after total extirpation, it would argue much in its favor; but, on the contrary, even taking the most favorable reports, its percentage of those cured after two years is not more than that of those by high amputation, according to Dr. Duncan.

With greater familiarity with the operation I have no doubt that in the future the percentage of deaths from the operation will be greatly reduced, yet I fail to see how this is materially to affect the longer interval, which is what we so much desire, and which I am sure, from my own experience, can be best obtained by high amputation.

That total extirpation has its appropriate field I am sure, for how else should we treat a case of cancer of the body of the uterus, or of such disease affecting the body and neck together? One such case I had the pleasure of reporting to the Obstetrical Society of Boston about a year ago, published in the "Boston Medical and Surgical Journal" of 1885, which specimen I now have the pleasure of presenting to you; the result of the case was a perfect recovery from the operation, but a recurrence of the disease at the site of the wound within five months.

In conclusion, then, I would say, first, that, from the results thus far obtained, high amputation should be practiced in all cases of cancer of the cervix or of the cervix and lower part of the body of the uterus in which any radical operation is practicable.

Second, that kolpo-hysterectomy should be performed in all cases of cancer of the body, or of the body primarily and secondarily affecting the cervix.

DISCUSSION.

Dr. INGALLS asked the reader if, when the base of the bladder was extensively infiltrated and there was much loss of tissue, the disease could be thoroughly removed without excising the base.

Dr. BAKER replied that he did not attach so much importance to the involvement of the vaginal walls. As long as the disease did not extend *laterally* it was generally possible to remove it, but, when the tissues at the sides of the uterus were affected, this was more difficult, because then there was no viscus the diseased portion of which might be excised. In cutting laterally there was great danger of injuring the ureters.

Dr. COE said that the point made by the last speaker was a most important one, since upon it hinged much of the success or failure in operations, either partial or radical, undertaken with a view to remove epithelioma of the cervix uteri entirely. The anatomical features of the parametran tissues were such that they were extremely liable to become involved in cases of malignant disease of the uterus. It was unnecessary to dilate upon the extreme richness of the vascular plexuses of the broad ligaments, or to remind the audience that these plexuses offered the most favorable agents for the spread of cancer. The extension of the disease to the anterior and posterior fornices, to the bladder, the rectum, and eventually to the body of the uterus, was a simple extension by contiguity. The limits of the affected tissue could generally be defined by the vaginal touch, and, as Dr. Baker had shown, its entire removal was frequently practicable; but, when the disease spread to the broad ligaments, the

condition was far more serious. Not only were the early metastases slight and impalpable to the examining finger, but the surgeon could never be sure that he had not left behind a hidden spark that would later be fanned into a flame. Mr. Alban Doran had laid stress upon this subject in some remarks made by him before the London Obstetrical Society, and the speaker said that he had once invaded the broad ligaments; the surgeon could never be sure that he had not left behind impalpable foci of infection; such rendered his work entirely useless. Dr. Coe added that both his surgical and pathological studies had contributed to confirm him in this opinion. It was utterly vain to talk about the positive determination of the condition of the peri-uterine tissues by the bimanual touch. Candid operators must acknowledge that the cases which they had selected as the most favorable for operation had frequently proved to be most disappointing in this respect. Dr. P. F. Mundé, who had argued ably in favor of vaginal hysterectomy, had acknowledged with his usual frankness that he did not meet with more than one case of epithelioma in a hundred which he regarded as suitable for the radical operation. The speaker said in conclusion that no commentary upon Dr. Baker's statistics was necessary; they were simply remarkable.

Dr. GOFFE agreed with Dr. Coe as to the difficulty in removing all of the diseased tissue. He had had a good opportunity to study cancer of the uterus during the past few years, and had found that it was almost impossible to decide when the disease had extended from the mucous membrane of the cervix to that of the cavity of the body. He desired to ask Dr. Baker how he proceeded to determine whether a case was suitable for operation or not.

Dr. BAKER said in reply that he only desired to know before operating whether the uterus was fixed or movable. After excising as much of the cervix as possible, he could explore with his finger the body of the uterus and ascertain how much of it was involved. The microscopist could tell from an examination of the specimen whether the diseased tissue had been entirely removed. The cautery completed the destruction of any remains of the growth that might be left. If necessary, a secondary

operation could be performed in order to remove it, but this was generally difficult.

Dr. CURRIER said that—in view of what Dr. Coe had just said concerning the probable diffuse condition of cancer in cases which to all appearances, clinically, held out the hope that the disease might be eradicated by operative procedure, and in view of what we all knew concerning the insidious nature of this disease—the best we could hope for was to palliate and to retard its development as far as possible. For this end Dr. Baker's operation was certainly a useful one. No one congratulated him more heartily than himself on the excellent results which he had obtained in the cases which he had reported, and yet, as he himself had admitted, statistics of this character were both misleading and insufficient for any generalization. It had been observed by Billroth that, if cancer failed to recur two years after an operation for its removal, there was reasonable hope that it had been extirpated, and, if it should fail to return after three years, we could be almost confident that it would not return. In the light of recently tabulated cases, and, indeed, from the quotations which Dr. Baker had made, we could see that this hope was fallacious. In exceptional cases cancer of the uterus and its surroundings was of long duration. Only yesterday, the speaker said, he was reading of a case of cancer of the ovary in which laparotomy and ovariectomy were performed by E. Martin in 1871. The specimen was examined by no less an authority than Virchow, and was declared to be cancerous. In 1878, the growth having returned, the patient came to Schröder and requested an operation. He at first declined, but, as the patient insisted, he made an exploratory incision and found, as he had anticipated, that the growth could not be removed; the patient recovered, and did not die until 1881, ten years from the time of the first operation. Some surgeons had objected to performing any operations for this disease, because of their hopelessness as to a final result; the speaker did not agree with them. When one had had much experience with such cases and remembered the intense pain, the exhausting hæmorrhages, and the offensive discharges that accompanied them, and then the relief to all these symptoms after either the operation which had been described

by Dr. Baker, or the thorough curetting with Sims's instrument, could he refuse the operation even if this relief was to last for only a few months? The words of Schröder in reply to those who found fault with him for operating in cases in which such unsatisfactory results could be expected were worthy of being quoted and remembered: "I shall continue to operate upon patients with disease of this character as long as I am satisfied that I can give them relief from their sufferings for even a few months."

Dr. A. P. DUDLEY thought that high amputation had its advantages over vaginal hysterectomy, since it was not generally necessary to open the peritonæum, and there was less danger of shock at the time of the operation. It also had its disadvantages, one of which was that after the operation there was so much contraction of the parts that the healthy tissue was frequently entirely concealed, so that, unless the patient was carefully watched, the disease might return and make extensive inroads before there was any external evidence of it. Dr. Baker's statistics certainly showed better results than had yet been obtained by hysterectomy; but hysterectomy was an operation that had not yet been perfected, since one reason for the large mortality could be referred directly to defects in the *technique*. If performed with the patient in the lithotomy position, vaginal extirpation was attended with many difficulties; as surgeons learned to operate uniformly with their patients in Sims's position, the statistics would certainly improve. The speaker stated in conclusion that his experience with vaginal hysterectomy for cancer had been confined to five cases, in two of which he operated himself, one patient being cured, while the other died of secondary hæmorrhage. In the three other cases, in which he assisted at the operation, a speedy recurrence of the disease was reported.

